Customer No.: 31561
Docket No.:9747-US-PA
Application No.: 10/065,566

AMENDMENTS

To the Claims:

Claim 1 (currently amended) A driving circuit for a display device having a plurality of pixels, wherein the driving circuit is used for driving ~~the~~ a light-emitting ~~device~~ diode in each pixel, the driving circuit comprising:

a light-emitting device driving unit, coupled to the light-emitting ~~device~~ diode, for providing a driving current to the light-emitting ~~device~~ diode selectively; and

a discharging unit, coupled to a point between ~~for connecting~~ the light-emitting device driving unit and the light-emitting diode, for discharging the light-emitting ~~device~~ diode according to a voltage level of a control signal.

Claim 2 (currently amended) The driving circuit of claim 1, wherein the driving circuit ~~may~~ further includes a light-emitting device selection unit coupled to the light-emitting device driving unit for receiving a scan signal and a data signal, and when the scan signal and the data signal are at logic level '1', the light-emitting device selection unit enables the light-emitting device driving unit to provide a driving current to the light-emitting ~~device~~ diode.

Claim 3 (currently amended) The driving circuit of claim 2, wherein the control signal uses the scan signal from the next pixel, the discharging unit discharges the light-emitting ~~device~~ diode in response to a logic state of the scan signal from the next scan line immediately.

Claim 4 (currently amended) The driving circuit of claim 3, wherein the discharging unit discharges the light-emitting ~~device~~ diode when the scan signal on the next pixel is at a logic level '1' or a high voltage level.

Claim 5 (currently amended) The driving circuit of claim 1, wherein the discharging unit is coupled to a ground potential so that electric charges are discharged from the light-emitting ~~device~~ diode to the ground.

Claim 6 (currently amended) The driving circuit of claim 1, wherein the discharging unit is coupled to a negative voltage so that electric charges are discharged from the light-emitting ~~device~~ diode to the negative voltage terminal.

Claim 7 (currently amended) The driving circuit of claim 1, wherein the discharging unit is a transistor and the transistor is switched on to discharge the light-emitting ~~device~~ diode according to the voltage level of the control signal.

Claim 8 (currently amended) The driving circuit of claim 7, wherein the gate terminal of the transistor is connected to the control signal terminal and the drain terminal of the transistor is connected to a ground potential so that electric charges in the light-emitting ~~device~~ diode discharge to the ground when the transistor is turned on by the control signal.

Claim 9 (currently amended) The driving circuit of claim 7, wherein the gate terminal of the transistor is connected to the control signal terminal and the drain terminal of the transistor is connected to a negative voltage terminal so that electric charges in the light-emitting ~~device~~ diode discharge to the negative voltage terminal when the transistor is turned on by the control signal.

Claim 10 (currently amended) The driving circuit of claim 1, wherein the light-emitting ~~device~~ diode includes an organic light emitting diode (OLED).

Claim 11 (currently amended) The driving circuit of claim 1, wherein the light-emitting ~~device~~ diode includes a molecular light-emitting diode.

Claim 12 (currently amended) A display device having a plurality of pixels, wherein each pixel has a driving circuit for driving ~~a~~the light-emitting ~~device~~ diode inside each pixel, the driving circuit comprising:

a light-emitting device driving unit coupled to the light-emitting ~~device~~ diode for providing a driving current to the light-emitting ~~device~~ diode selectively; and

a discharging unit coupled to the light-emitting device driving unit for discharging the light-emitting ~~device~~ diode according to a voltage level of a control signal.

Claim 13 (currently amended) The display device of claim 12, wherein the driving circuit ~~may~~ further includes a light-emitting device selection unit coupled to the light-emitting device driving unit for receiving a scan signal and a data signal, and when the scan signal and the data signal are at logic level '1', the light-emitting device selection unit enables the light-emitting device driving unit to provide a driving current to the light-emitting ~~device~~ diode.

Claim 14 (currently amended) The display device of claim 13, wherein the control signal uses the scan signal from the next pixel , the discharging unit discharges the light-emitting ~~device~~ diode in response to a logic state of the scan signal from the next scan line immediately.

Claim 15 (currently amended) The display device of claim 14, wherein the discharging unit inside the driving circuit discharges the light-emitting ~~device~~ diode when the scan signal on the next pixel is at a logic level '1' or a high voltage level.

Claim 16 (currently amended) The display device of claim 12, wherein the discharging unit inside the driving circuit is coupled to a ground potential so that electric charges are discharged from the light-emitting ~~device~~ diode to the ground.

Claim 17 (currently amended) The display device of claim 12, wherein the discharging unit inside the driving circuit is coupled to a negative voltage so that electric charges are discharged from the light-emitting ~~device~~ diode to the negative voltage terminal.

Claim 18 (currently amended) A method of driving a display device by a driving circuit, wherein the display device has a plurality of pixels and the driving method is used for driving the light-emitting ~~device~~ diode inside each pixel, the driving method comprising ~~the steps of~~:

providing a driving current to one of the light-emitting ~~devices~~ diodes selectively; and

discharging the light-emitting ~~device~~ diode according from a point for connecting the light-emitting ~~device~~ diode and the driving circuit to a voltage level of a control signal while the light-emitting ~~device~~ diode is driven by a driving current.

Claim 19 (currently amended) The driving method of claim 18, wherein the step of providing a driving current to one of the light-emitting ~~devices~~ diodes selectively includes

providing a driving current to the light-emitting ~~deviee~~ diode when a scan signal and a data signal sent to the display device are at a logic level '1' or a high voltage level.

Claim 20 (original) The driving method of claim 19, wherein the control signal is provided by the scan signal of the next pixel in the display device.

Claim 21-23 (canceled)

Claim 24 (new) A circuit for driving a pixel in a display, wherein the driving circuit is used for driving a light-emitting diode in each pixel, the circuit comprising:

a first thin film transistor, coupled to the light-emitting diode, for providing a driving current to the light-emitting diode selectively;

a second thin film transistor, coupled to a point between the first thin film transistor and the light-emitting diode, for discharging the light-emitting diode according to a voltage level of a control signal; and

a third thin film transistor, coupled to the first thin film transistor, for controlling the first thin film transistor to provide the driving current to the light-emitting diode, wherein the control signal is activated by a scan voltage from a next scan line for a next pixel, the second thin film transistor discharges the light-emitting diode in response to a logic state of the scan signal from the next scan line immediately.

Claim 25 (new) A driving method for a display, wherein the display has a plurality of pixels coupled to corresponding one of a plurality of scan lines, the driving method comprising:

switching the plurality of scan lines one by one;

driving a light-emitting diode inside each pixel by providing a driving current to one of the light-emitting diodes selectively; and

discharging the light-emitting diode from a point between the first thin film transistor and the light-emitting diode under the control of a scan voltage from the next scan line for a next pixel immediately after the next scan line being switching.